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The PEIRS concludes, among these three alternative systems, that the HST is the Preferred System Alternative. The Summary section of the PEIRS, on pages S-9 to S-16, a copy of which is attached, provides a comparison of the three alternatives with regard to the environmental issues listed above. As stated on page S-15 of the Summary section, the advantages of the proposed HST Alternative include the following:

- "The HST system would provide a new mode of intercity travel and an improved level of connectivity between existing transportation modes (air, highway, transit) that would not be provided under the No Project or Modal Alternative.
- For longer distance inter-regional markets such as downtown San Francisco to downtown Los Angeles, the HST Alternative would provide door-to-door travel times that would be comparable to air transportation and less than one half as long as automobile travel times.
- The HST alternative would provide a completely separate transportation system, that would be less susceptible to many factors influencing reliability, such as capacity constraints, congestion, and incidents that disrupt service.
- The HST Alternative would be highly compatible with local and regional plans that support rail systems and transit-oriented development and would offer opportunities for increased land use efficiency."

For these, and other reasons described in the PEIRS, LADOT agrees that the HST Alternative is the Preferred System Alternative, among the three alternatives compared.

In the Final PEIRS, which will be prepared after the close of the public comment period on the Draft PEIRS, the Authority and the Federal Railroad Administration may select a preferred HST corridor/alignment, general station locations, and recommended mitigation strategies. At a further stage, should the HST advance to a further stage of analysis, project-specific environmental analyses for route segments and station locations will be prepared. AL050-4

Policy Evaluation

As stated above, the focus of the PEIRS is to compare the No Project, Modal and High Speed Train Alternatives. LADOT concurs with the PEIRS that, based upon the evaluation criteria utilized, the High Speed Alternative is the Preferred Alternative System. AL050-5

However, the City's interest in the HST goes well beyond the scope of the PEIRS. If the HST is selected as the Preferred Alternative, and subsequent "project level" studies commence, the City needs to ensure that HST planning addresses the City's concerns regarding local impacts. Furthermore, the City needs to coordinate alternative analyses along certain corridors within the Southern California region, where proposals for the HST appear to overlap with SCAG's (Southern California Association of Governments) Maglev system proposals, to determine the best technology for each corridor.

Stated another way, there should be an effort to define the HST network utilizing a combination of technologies that would make sense for the corridors that make up parts of the network.

To facilitate further evaluation of the HST system, LADOT has identified technical and policy evaluation criteria by which the proposed HST may be evaluated. Most of these criteria apply not just to the HST system but also to any other large scale transit project in the region. LADOT has organized its evaluation into benefits and concerns for the City of Los Angeles.

A. Benefits of High Speed Train

The probable benefits of the proposed High Speed Train include the following:

1) Performance

Issue: Will the proposed system attract sufficient ridership to substantially relieve automobile congestion, by providing a compelling alternative to intercity air and automotive travel, with corresponding benefits to air quality?

According to the PEIRS, because the HST would offer competitive travel times and fares to both air and auto travel, the HST system would attract up to 68 million intercity and commuter passengers annually by 2020.

For example, the point-to-point travel time between downtown San Francisco and downtown Los Angeles would be closely competitive with commercial air travel (approximately 3 ½ hours). According to the HST Business Plan (approved in the year 2000) the one-way business fare would be approximately $42 and the one-way non-business fare would be $24. By 2020, the Business Plan projects that the HST will generate surplus revenue because of its competitive fare structure. Corresponding benefits to air quality are listed on page S-11 of the attached Summary of the PEIRS.

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2) Relationship to Existing Transit Service

Issue: Does the proposed system primarily complement, rather than compete with, existing transit infrastructure, specifically Metrolink service and MTA bus service?

The proposed HST would not, in general, compete with existing Metrolink and MTA transit service, primarily because the HST is an inter-regional service. In most cases, Metrolink service would serve as a part of the "feeder" service to the HST system, and not be in direct competition with the HST.

With regard to the corridor between Los Angeles and Ontario, Metrolink staff has indicated that Metrolink service could probably be more easily expanded along the Interstate 10 route than along the Interstate 60 route, because of right-of-way constraints along the Interstate 60 route. A benefit of the proposed HST, is that it would not share the same right-of-way with Metrolink along the Interstate 10 Freeway. The proposed HST alignment would, in general, follow the Interstate 60 Freeway, to the south (using an existing freight rail alignment).

3) Technological Compatibility With Existing Rail Infrastructure

Issue: Are there potential benefits of the ability of the HST and Metrolink to "share track" on selected sections of corridors?

Although the HST would be electrically powered, and the Metrolink system is diesel powered, the two systems can utilize the same track. While a completely dedicated train technology using separate tracks would be required on the majority of the proposed HST system, because of extensive urban development and severely constrained right-of-way, HST service in certain areas may need to share tracks with existing passenger rail services. For example, the PEIRS proposes that HST share tracks with existing rail on the corridor between San Francisco to San Jose and along the existing LOSSAN corridor between Los Angeles Union Station and Orange County. Sharing the tracks facilitates access to HST because it makes the interface between commuter rail systems, such as Metrolink, an ideal feeder to the HST.
In addition to facilitating access, sharing track with regional commuter services could help mitigate problems with the current commuter systems. The HST project would include grade separation of the rail with streets and highways resulting in safety and service improvements for local long-distance commuters, improving traffic flow at rail crossings, and reducing noise impacts (by eliminating horn noise

and warning gates from existing rail services).

In the Bay Area, the Authority has concluded that the HST will "share" tracks with express Caltrain commuter service between San Jose and San Francisco. The Authority should continue to investigate the opportunity to partner with Metrolink in Southern California, to determine if Metrolink could potentially provide express regional commuter services on the HST tracks throughout the Los Angeles Metropolitan Area (Los Angeles to Palmdale, Los Angeles to the Inland Empire, and Los Angeles to Orange County).

4) Support of Aviation Plan

Issue: Will the proposed system relieve aviation demand on Los Angeles International Airport (LAX), by providing an alternative inter-regional travel mode, and by providing ground access to Ontario and Palmdale Airports?

The Authority believes that the PEIRS proposal would reduce short-haul aviation demand within the State by providing an intercity high speed rail alternative, thus reducing demand for air travel and congestion around airports. The magnitude of the impact on aviation demand is evident in the Authority's estimate that the HST system will divert at least 14.7 million passengers from air transportation by 2020. Accordingly, the Authority estimates that availability of the HST service would divert over half of the year 2020 air passenger trips, which have both origin and destination within California.

With regard to access to Ontario and Palmdale Airports, the HST system includes a proposed line between LAX via Union Station to Ontario Airport, and a proposed line between Union Station and the Antelope Valley. The City Council has indicated its strong support of the connection from Union Station to the Antelope Valley, as compared with the alternate proposed line via Interstate 5.

5) Reliability

Issue: Does the proposed transit technology have a proven track record with regard to reliable operations and service?

The HST system would utilize an electrically powered high speed steel-wheel on steel-rail technology similar to that which is in use in many countries, including Japan, France and Germany. Over several decades of use, the technology has proven itself in terms of reliable operations and service. For example, according to

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the Authority, the Shinkansen in Japan has operated for nearly forty years carrying well over 6 billion passengers, without a single train-related fatality. Nearly 300 high speed trains operate daily on the "Tokaido" line between Tokyo and Osaka with an average deviation from schedule per train of less than 20 seconds. According to the Authority, statistics from HST operators in Europe further confirm the high level of reliability of HST technology. In France, more than 98% of the TGV train runs have been completed within one minute of schedule.

6) Ownership

Issue: Would the ownership of the system be public or private sector?

The proposed HST would be publicly owned. Public sector ownership avoids the problem of a "non-compete" clause which accompanies private sector ownership. In order to ensure profitability, private owners of transit systems usually require public agencies which control adjacent arterial and transit systems to sign a non-compete agreement. Such an agreement either precludes the public sector from making improvements to public transportation systems which might reduce use of the private system, or the agreement requires that the public sector compensate the private entity for lost revenue.

The problems of private ownership were illustrated recently when the private owner of the 91 Express Lanes, based upon a "non-compete" clause in the franchise agreement with Caltrans, sued Caltrans to prevent improvements from being made to the 91 Freeway. The private developer prevailed in court and the Orange County Transportation Authority (OCTA) was forced to purchase the 91 Express Lanes for $207.5 million in January 2003.

The proposed public ownership of the HST system offers the benefit of avoiding the difficulties inherent with private ownership and a "non-compete" clause.

7) Job Creation for Construction and Operations

The proposed HST would be the largest capital works project in the history of California. The PEIRS estimates that the construction of the project would directly result in 300,000 job-years employment over the construction period, and that because California would have a stronger economy if the HST system is built, there would be about 450,000 additional permanent jobs by 2035.

8) Grade Separation

The proposed HST would be fully grade separated at streets and highways, with the track either at grade, in an open trench or tunnel, or on an elevated guideway along various parts of the route. The proposed HST may offer the advantage of shared, grade separated, track with other forms of rail transit. In such cases, those other forms of rail transit would benefit from any newly constructed grade separations. Additionally, automobile traffic would also benefit from any newly constructed grade separations, resulting in congestion relief.

B. Concerns Regarding High Speed Train

LADOT has identified the following concerns regarding the proposed HST:

1) Cost of Feeder System and Station Impacts

Issue: To what extent will the necessary "feeder system" for the HST be paid for by HST project financing? To what extent does the proposed HST alignment and stations have a significant impact on adjacent communities and streets?

To ensure adequate ridership for the HST, there will need to be sufficient "feeder" or distribution systems. Although existing Metrolink rail and MTA bus service appear to be primarily complementary to the HST system, there will be a need for substantial additional infrastructure. Additional bus, rail, arterial and parking capacity must be provided. The HST system should share in any expanded highway and transit project costs that may be incurred by local entities.

The PEIRS does not specifically include a financing plan for the system. However, in 2002, the Legislature and Governor approved Senate Bill 1856 which, subject to voter approval, would provide for the issuance of $9.95 billion of general obligation bonds, $9 billion of which would be used in conjunction with available federal funds for the purpose of funding the planning and construction of a HST system. The remaining $950 million of the bond proceeds would be available for capital projects on other passenger rail lines to provide connectivity to the HST system for capacity enhancements and safety improvements to those lines. The City should ensure that it receives a fair allocation of the $950 million designated for such improvements. In addition, the City should be aware that there will probably be additional "feeder system" costs, not covered by the bond measure. Until project studies are completed, it is not possible to determine the extent of local impacts and

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additional costs.

If the HST is selected as the Preferred Alternative, proposed alignment and station impacts must be addressed in subsequent "project-level" studies. The PEIRS proposes only three stations in the City of Los Angeles, including Union Station (or its vicinity), Sylmar and LAX. Local impact Issues which will need to be addressed include:

- Impacts on traffic circulation and congestion around stations
- Location and cost of new parking facilities
- Specifically regarding Union Station, the probable need to enlarge pedestrian tunnels servicing the station, to allow for peak period usage

2) Phasing of HST Deployment

Issue: Will initial segment(s) of the HST be built in the City of Los Angeles and the Southern California region?

The Southern California region deserves, by virtue of its need (congestion and air quality problems), as well as the size of its population, to be an early recipient of the benefits of the HST. Accordingly, the City wishes to ensure that a significant portion of the initial segments of the HST system be constructed in Southern California. Because the PEIRS does not establish a phasing sequence, the City must convey its concerns to the Authority with regard to project phasing.

It should be noted that, although the City Council has not in the past indicated a preference for HST phasing, the Council has indicated a preference for phasing of the proposed Maglev system. Specifically, on June 28, 2000, the City Council (CF 00-1239) indicated that it would only support the Maglev proposal if the project included as 1st Phase: Riverside to Union Station, and 2nd Phase: Palmdale to Union Station.

Furthermore, the PEIRS does not identify minimum operable segments (MOS). If the HST were to be built in phases, it would be preferable for each phase to represent an MOS, so that the benefits of the system could begin to accrue incrementally. The City recommends that the Authority identify MOS in future studies.

3) Relationship of HST to Proposed Maglev High Speed Rail system

Issue: Does the proposed HST system integrate with and complement the Maglev system, proposed by SCAG?

Although the HST system is primarily an inter-regional system, and the Maglev system would be primarily an intra-regional system, there are overlaps in the proposed alignments. For example, both systems have alignments from LAX (or West Los Angeles) to Ontario. Since both systems would have stations spaced at similar intervals (every 15 to 20 miles), and would travel at average speeds of approximately 100 mph, we question whether both systems are needed on this corridor.

Moreover, since both systems employ different technologies, which use incompatible track, the need for passengers to transfer between trains will probably be greater if both systems are deployed. If both systems are deployed, every effort should be made to avoid unnecessary overlap in alignments and to facilitate transfers between the two systems.

At the direction of City Council, LADOT is negotiating with SCAG to ensure that grants from the Federal Railroad Administration provide funding for an alternatives study, to determine the most appropriate technology and alignment for high speed rail along the Los Angeles to Ontario corridor. Also participating in these discussions and negotiations are the City of Ontario, and the San Bernadino Council of Governments.

4) Consistency with the Transportation Element of the City's General Plan and other City Plans

Issue: The City has numerous plans, including the General Plan, Community Plans and Specific Plans which may be impacted by the proposed HST

To the extent the City's various plans are impacted by the HST, the community plans will need to be revised to reflect the proposed system. In addition, if the Authority includes a connection to LAX in the Final PEIRS, the LAX Master Plan will need to be revised accordingly. Furthermore, Los Angeles World Airports is currently developing Master Plans for both Ontario International and Palmdale Regional airports. The City requests that, in the next phase of HST environmental impact reports, the Authority seek to coordinate HST planning with the Master Plans for these airports.

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5) Convenient access to existing transit stations and regional airports

Issue: Does the proposed HST project provide convenient access to existing transit stations and regional airports so as to facilitate the integration of regional transit and aviation systems, and maximize ridership?

In order for the proposed HST system to realize its potential and justify its cost, it must integrate with existing transportation systems. Specifically, the City is concerned that the HST connect as directly as possible with Union Station and with LAX, Ontario and Palmdale Airports. Convenient connections, both in distance and time, between HST and these transportation hubs is essential in order for the benefits of HST to be realized. Upon the preparation and release of "project-level" HST plans, the City will provide further comments in this regard.

Conclusion

The objective of this report is to report on the specific finding of the PEIRS that the HST is the Preferred Alternative among the three alternative systems studied. LADOT concurs with this finding. In addition, the report has identified technical and policy evaluation criteria by which the proposed HST may be evaluated. LADOT has organized its evaluation into both benefits and concerns for the City. Based upon this evaluation LADOT finds that the proposed High Speed Train would provide substantial benefits for the transportation infrastructure for the City, the region and the State. The City should monitor and attempt to shape the development of the project to address the concerns which have been identified and to ensure that the project best represents the City's interests.

FISCAL IMPACT STATEMENT

This report represents comments only to the draft PEIRS, and has no impact on the City's General Fund.

COORDINATION

A preliminary report on the PEIRS was made to the Transportation Committee on May 12, 2004. Since that time, staff has discussed the issues with LAWA, the Environmental Affairs Department and the Planning Department, as well as SCAG, MTA, Caltrans, and the California High Speed Rail Authority.

Attachments

MOTION

On today's Council agenda is Item #31 which formalizes the City of Los Angeles's participation in a Maglev Joint Powers Authority. In a similar high speed rail project, but a different public agency, the California High Speed Rail Authority is currently circulating it's draft Environmental Impact Report/Environmental Impact Statement and is collecting comments from the public and from public agencies. That comment period closes on May 14th, 2004.

It is important that this project, which would greatly impact residents of the City of Los Angeles and in particular the Northeast San Fernando Valley, have sufficient input from the public and the City of Los Angeles. The City of Los Angeles needs to pro-actively analyze this project to determine the exact impacts to the community and devise any necessary mitigation measures before the public comment period ends.

I THEREFORE MOVE that the Department of Transportation report back to the Transportation Committee of the Los Angeles City Council with its analysis of the impacts of this proposed high speed rail network and that this Committee report should serve as the City of Los Angeles's formal comments on the California High Speed Rail Authority's Draft EIR/EIS. That report shall come back to the City Council within 30 days so that the City has time to make official comments before the review period closes.

PRESENTED BY: _____
ALEX PADILLA
Councilmember, 7th District

SECONDED BY: _____

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S.6 System-wide Environmental Impact Comparison

The Draft Program EIR/EIS analysis shows that the No Project, Modal, and HST Alternatives would have differences in both potential adverse and beneficial environmental impacts at the system-wide level. These differences, summarized in Table S.6-1, are based on the analysis presented in Chapter 3, *Affected Environment, Environmental Consequences, and Mitigation Strategies*. For many of the environmental areas discussed in Table S.6-1, the quantities presented represent areas within which potential impacts might occur. For example, the area of floodplains includes all floodplains within 100 feet (ft) (30 meters [m]) of either side of the centerline of the alignment considered. However, the actual right-of-way necessary for the improvements considered is much smaller (e.g., only 25 ft [8 m] on either side of centerline for HST). Therefore the magnitude of potential impacts reported is considerably larger than the actual impacts that would be expected from either the HST or Modal Alternative.

The analysis for this Program EIR/EIS used the best available information concerning environmental resources as applied in a statewide geographic information systems (GIS) database. No significant adverse impacts or key differences among the alternatives are described in Chapter 3 for geology, electromagnetic interference (EMF/EMI), public utilities, or hazardous materials; therefore, these topics are not shown in the summary table.

Mitigation strategies are described at a program level for potential adverse impacts identified for the HST Alternative in noise, cultural resources, visual contrasts, biology, wetlands, parkland, and hydrology (shown on Table S.6-1). The significance of potential environmental impacts would need to be further determined at the next level of environmental review, and specific mitigation measures identified. The subsequent analysis and field studies that would be necessary at the next level of environmental review are also briefly described, and they would offer further opportunities to make changes to the alignments and station locations in order to avoid and to substantially reduce significant impacts on these resources. Project-specific environmental impacts and mitigation measures to address significant impacts would be described during the next stage of environmental review, should the project move forward.

Table S.6-1
Summary of Key Environmental Impacts and Benefits for System Alternatives

Key Environmental Issues	Alternative			Mitigation Strategy for HST
	No Project	Modal	HST	
Traffic and Circulation	Capacity is insufficient to accommodate projected growth. Over half of 68 intercity highway segments considered would operate at unacceptable levels of service with increased congestion, travel delays, and accidents compared to existing conditions. Congestion would increase.	Congestion reduction on intercity highways compared to the No Project and HST Alternatives. However, the analysis could not account for potential use of the excess capacity by non-intercity (commuter and short-distance) trips. Congestion and travel delays on surface streets leading to and from highways/ airports.	Congestion reduction on intercity highways compared to the No Project Alternative. However, the analysis could not account for potential use of excess capacity by non-intercity (commuter and short-distance) trips. 34 million fewer long-distance automobile passengers on highways. Localized traffic conditions around stations impacted.	Encourage use of transit to stations. Work with transit providers to improve station connections.

Key Environmental Issues	Alternative			Mitigation Strategy for HST
	No Project	Modal	HST	
Travel Conditions (travel time, reliability, safety, connectivity, sustainable capacity, passenger cost)	Longer travel times, more delay. Lower reliability due to dependence on the automobile. Increase in injuries and fatalities due to increase in highway travel. No net improvement to connectivity options. No significant increase in capacity for highway or air infrastructure, and significant worsening of congestion due to increased demand.	Travel time reduction compared to the No Project Alternative. Improved reliability over No Project due to increased capacity. Increase in injuries and fatalities due to more highway travel. No new modes introduced; additional air frequency. Modal improvements would provide sufficient capacity to meet representative demand, but would have little or no capacity beyond that level. Passenger costs approximately the same as the No Project Alternative.	Travel time reduction compared to the No Project Alternative. Greatest improvement in reliability due to high reliability of HST mode; significant levels of diversion to HST from auto and air result in reduced congestion; and additional modal option improves reliability for overall transportation system. Decrease in injuries and fatalities due to diversion of trips from highways. Highest level of connectivity. New mode would add a variety of connections to existing modes, additional frequencies, and greater flexibility. HST system would provide sufficient capacity to meet representative demand and would provide substantial additional capacity with minimal additional infrastructure. HST system would provide a release valve for the existing intercity modes. Overall savings in passenger costs of 8% to 44% compared to No Project, depending on the origin and destination of travel. HST passenger costs are competitive with the automobile travel and less expensive than air travel.	N/A

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Key Environmental Issues	Alternative			Mitigation Strategy for HST
	No Project	Modal	HST	
Air Quality (Conformity Rule; tons of pollutants)	Emissions predicted to decrease in 2020 due to low emission vehicles; PM10 to increase statewide. Estimated CO 806,304 tons/year, NO_x 187,972 tons/year, TOG 121,222 tons/year; CO_2 374 million tons/year.	Vehicle miles traveled increase by 1.1% over 2020 No Project. CO 812,801 tons/year; NO_x,189,238 tons/year; TOG 122,049 tons/year; CO_2 374 million tons/year.	Air quality benefit. Decrease in pollutants compared to No Project: CO 799,204 to 803,140 tons/year; NO_x 185,232 to 186,384 tons/year; TOG 120,510 to 120,895 tons/year; CO_2 368 to 372 million tons/year (0.45% to 1.4% less than No Project). (Range based on low- to high-end ridership forecasts.)	Control of construction-related emissions.
Energy Use	24.3 million barrels of oil consumed annually in 2020; 6.8 million over existing conditions.	Higher total energy consumption: 24.5 million barrels of oil in 2020. Higher construction energy consumption 241 MMBtus.	Energy benefit. Lower total energy consumption: 19.1 million (high-end ridership) and 22.3 million (low-end) barrels of oil in 2020; overall decrease of 4.8 to 5.3 million barrels of oil compared to No Project. Increase in electric power demand/use of natural gas. Lower construction energy consumption: 152 MMBtus (high-end ridership) and 127 MMBtus (low-end ridership).	Develop and implement energy conservation plan for construction.
Land Use (compatibility and property impacts)	Expansion of urban sprawl as population grows and congestion increases; development on open space and agricultural lands.	Improved access to outlying areas and communities; sprawl; incompatible with transit-first policies. High property acquisition impacts along constrained existing rights-of-way in heavily urbanized areas; 309 mi (497 km) (20% of corridor) would affect high-impact land uses.	Controlled growth around stations, urban in-fill; compatible with transit-first policies. Majority of property acquisition along existing rights of way, some acquisition along new rights of way in undeveloped areas; between 53 and 88 mi (85 and 142 km) of HST would affect high impact land uses. (Range based on alignment options selected to comprise the HST system.)	Continued coordination with local agencies. Explore opportunities for joint and mixed-use development at stations. Relocation assistance during future project-level review.

Key Environmental Issues	Alternative			Mitigation Strategy for HST
	No Project	Modal	HST	
Visual Quality	No predictable change to existing landscape.	Low to moderate contrasts along existing highways and airports; high contrasts through mountain crossings and natural open space landscapes.	Moderate to high visual contrasts for elevated structures; high sensitivity in scenic open space and mountain crossings.	Design strategies to minimize bulk and shading of bridges and elevated guideways. Use neutral colors and materials to blend with surrounding landscape features.
Noise	More traffic and more air operations from growth in the intercity demand generate more noise.	210 mi (338 km) or 14% of total highway corridor miles improved would have high impacts on noise-sensitive land use/populations. The Modal Alternative would include five additional runways statewide in heavily urbanized areas. Noise is one of the most prominent factors in the environmental acceptability of airport improvement expansion and is often the limiting factor in approval of such improvements.	21 to 107 mi (34 to 172 km) or 3% to 14% of alignment length statewide would have high impacts on noise-sensitive land use/populations; with mitigation, 0% of alignment would have high impacts. Noise increase due to additional high-speed train frequencies. Noise reduction from existing conditions due to elimination of horn and crossing gate noise resulting from grade separation of existing grade crossings. (Range based on alignment options selected to comprise the HST system.)	Consider sound barriers along noise-sensitive corridors; track treatment for vibration.
Farmland (includes area within 50 ft [15 m] on each side of alignment centerline [100 ft or 30 m total])	No predictable change from existing conditions as a result from the No Project transportation improvements. Continued loss of farmland in California at rate of 49,700 ac (20,113 ha) per year from population growth and urbanization (845,000 ac [341,960 ha] by 2020).	Right-of-way needs of the improvements could potentially impact a total of 1,118 ac (452 ha) of farmlands.	Right-of-way needs of the HST could potentially impact a total of 2,445 to 3860 ac (989 to 1,562 ha) of farmlands. New corridor alignments through farmlands could have potential severance impacts. (Range based on alignment options selected to comprise the HST system.)	Avoid or reduce impacts by sharing existing rail rights-of-way to the maximum extent possible and avoiding alignment options in established farmlands. Consider farmland preservation strategies.

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Key Environmental Issues	Alternative			Mitigation Strategy for HST
	No Project	Modal	HST	
Biological Resources and Wetlands (Includes area within 1,000 ft [305 m] [2,000 ft or 610 m total for urban areas], 0.25 mi [0.40 km] [0.5 mi or 0.8 km total for undeveloped areas], and 0.5 mile [0.8 km] [1 mi or 1.6 km total for sensitive areas] on each side of alignment centerline)	No predictable change from existing conditions.	77,018 ac (31,168 ha) of sensitive habitat; 23,172 ac (9,377 ha) of wetland; over 5 million linear ft of jurisdictional waters; 321 special-status species.	9,773 to 17,619 ac (3,955 to 7,130 ha) of sensitive habitat; 3,996 to 18,356 ac (1,617 to 7,428 ha) of wetland; 783,223 to 1.2 million linear ft of jurisdictional waters; 279 to 350 special-status species. (Range based on alignment options selected to comprise the HST system.)	Work with resource agencies to develop site-specific mitigation and impact avoidance strategies for project-level review.
Hydrology and Water Resources (includes area within 100 ft [30 m] on each side of alignment centerline [200 ft or 61 km total])	No predictable change from existing conditions.	5,540 ac (2,242 ha) of floodplains, 2.3 million linear ft of streams, 32,046 ac (12,969 ha) of groundwater resources within 100 ft (30 m).	1,865 to 3,873 ac (755 to 1,567 ha) of floodplains; 452,262 to 760,219 linear ft. of streams; 11,551 to 17,113 ac (4675 to 6,925 ha) of groundwater resources within 100 ft (30 m). (Range based on alignment options selected to comprise the HST system.)	Avoid or minimize footprint in floodplains; conduct project-level analysis of surface hydrology and coastal lagoons; BMPs for construction as part of Storm Water Pollution Prevention Plan.
Section 4(f) and 6(f) (Public Parks and Recreation) (includes area within 900 ft [274 m] on each side of alignment centerline [1,800 ft or 549 m total])	No predictable change from existing conditions.	132 Section 4(f) properties affected; 8 wildlife refuges.	54 to 89 Section 4(f) properties affected; 1 to 6 wildlife refuges. Potential impacts on Henry Coe State Park. (Range based on alignment options selected to comprise the HST system.)	Consider design options to avoid parkland and wildlife refuges; identify potential site-specific mitigation measures.
Cultural Resources (including Section 4(f) historical resources)	Low ranking for impacts on archaeological resources and historic property.	Medium ranking for potential impacts on archaeological resources and historic properties.	Medium to high ranking for potential impacts on archaeological resources and historic properties (HST would use existing rail corridors and some stations and nearby resources developed in historic period).	Develop procedures for fieldwork, identification, evaluation, and determination of effects for cultural resources in consultation with State Historic Preservation Office and Native American Tribes.

Key Environmental Issues	Alternative			Mitigation Strategy for HST
	No Project	Modal	HST	
Growth Potential	Statewide population is expected to grow by about 54%, statewide employment is expected to increase by 46%, and urbanized areas are expected to increase by 48% between 2002 and 2035.	Statewide population is expected to grow by 55% between 2002 and 2035 (360,000 more than No Project), statewide employment is expected to increase by 47% (250,000 jobs more than the No Project), and urbanized areas are expected to increase by 50% (65,500 ac [26,507 ha] more than the No Project) between 2002 and 2035. Increased development at major interchanges along highways and around airports; sprawl, particularly in Central Valley region.	Statewide population is expected to grow by 56% between 2002 and 2035 (700,000 more than No Project), statewide employment is expected to increase by 48% (450,000 jobs more than the No Project), and urbanized areas are expected to increase by 48% (2,600 ac [1,052 ha] less than the No Project). Transit-oriented development around stations; planned growth consistent with RTPs; growth around Merced.	Work with local communities to encourage higher density development around stations.
Cumulative Effects	Air quality effects of increased highway congestion and land use (sprawl) related to growth.	Visual effects of expanded and new facilities (paved surfaces, long linear features); cut and fill through mountain crossings. Impacts on farmlands. Surface runoff impacts and added impervious surface impacts on groundwater.	Visual effects of new linear feature along existing transportation facilities; electric power lines/catenary; construction-related short-term visual impacts. Impacts on farmlands.	See specific environmental areas of concern.

ac = acres
CO = carbon monoxide
CO_2 = carbon dioxide
ha = hectares
MMBtus = million British thermal units
NO_x = oxides of nitrogen
PM10 = particulate matter 10 microns in diameter or less
RTPs = regional transportation plans
TOG = total organic gases

As summarized in Table S.6-1 above, the environmental evaluation showed key differences between the Modal and HST Alternatives on a system-wide level. The following discussion further describes these key differences for the Modal and HST Alternatives.

Comment Letter AL050 Continued

Both the Modal and HST Alternatives would result in reduced travel times and congestion compared to the No Project Alternative. The highway and air transportation improvements of the Modal Alternative would result in a greater reduction of highway congestion than the HST alternative. However, congestion would still increase on highways and airports compared to existing conditions for both the Modal Alternative and the HST Alternative.

The proposed HST system would provide a new mode of intercity travel and an improved level of connectivity between existing transportation modes (air, highway, transit) that would not be provided under the No Project or Modal Alternative. For longer distance intercity markets such as San Francisco to Los Angeles, the HST Alternative would provide door-to-door travel times that would be comparable to air transportation and less than one half as long as automobile travel times. For intermediate intercity trips such as Fresno to Los Angeles, the HST Alternative would provide considerably quicker travel times than either air or automobile transportation, and would bring frequent HST service to many parts of the state that are not well served by air transportation. The HST Alternative would provide a completely separate transportation system that would be less susceptible to many factors influencing reliability, such as capacity constraints, congestion, and incidents that disrupt service. In addition, since high-speed trains are able to operate in all weather conditions, the on-time reliability of this mode of travel would be superior to travel by either auto or air. Based on experience with HST systems in other countries, HST has a lower accident and fatality rate than automobile travel. In terms of sustainable capacity, the HST Alternative would offer greater opportunities to expand service and capacity with minimal expansion of infrastructure, than either the No Project or Modal Alternatives. Finally, the passenger cost for travel via the HST service would be lower than for travel by automobile or air for the same intercity markets.

The HST Alternative has the potential to reduce overall air pollution and total energy consumption compared to the No Project and Modal Alternatives. Comparing the energy required by each mode to carry a passenger 1 mi (1.6 km), an HST needs only about one-third that of an airplane, one-half that of an intercity automobile trip, and one-fifth that of a commuter automobile trip. In addition, the construction of the HST Alternative would require 34% less energy than the construction of the Modal Alternative.

The HST Alternative would be highly compatible with local and regional plans that support rail systems and transit-oriented development and would offer opportunities for increased land use efficiency (i.e., higher density development and reduced rate of farmland loss). The HST Alternative would also meet the need for improved inter-modal connectivity with existing local and commuter transit systems. In contrast, the highway improvement options under the Modal Alternative would encourage dispersed patterns of development and would be inconsistent with the objectives of many local and regional planning agencies to promote transit-oriented, higher-density development around transit nodes as the key to stimulate in-fill development that makes more efficient use of land and resources and can better sustain population growth. Urbanized areas in California are expected to grow by 47% between now and 2035 under the No Project Alternative. Under the Modal Alternative, urbanized area growth is expected to be about 1.4% (65,500 ac [26,507 ha]) higher than the No Project Alternative, while the HST Alternative would result in a slight decrease in urban area growth (2,600 ac [1,052 ha]) compared to the No Project Alternative. However, the HST Alternative is expected to result in a slightly greater increase in population than the No Project and Modal Alternatives.

Compared to the Modal Alternative, the proposed HST Alternative would result in construction of substantially fewer miles of transportation right-of-way length (which has potential for high impacts on sensitive land uses and populations). For several alignment options, the HST would be expected to run adjacent to or within shared rights-of-way with existing rail lines. While there would be a potential noise increase due to additional HST services, existing train noise would be reduced in areas with existing grade crossings because horn and crossing gate noise due to grade separation would be eliminated.

Under the Modal Alternative, land use impacts would be considerable in the San Francisco to San Jose and Oakland to San Jose highway corridors where the existing rights-of-way would not accommodate adding lanes, and additional properties would be needed to accommodate potential highway expansions. This would also be true along the urban portions of the SR-99 corridor through the Central Valley, and in Southern California along I-10 from Los Angeles to San Bernardino and Riverside. The HST Alternative would have lower impacts in these regions because of extensive use of existing rights-of-way (e.g., Caltrain from San Francisco to San Jose) and higher compatibility in general with land uses along the rail corridors.

In the Central Valley, one of the most active agricultural regions in the U.S., the right-of-way requirements of the Modal Alternative would potentially impact 609 ac (246 ha) of farmlands. The HST Alternative, based on the system-wide application of a 100-foot wide right-of-way, could potentially impact a maximum of 2,096 to 3,002 ac (848 to 1,215 ha). However, it is possible to avoid or substantially reduce potential impacts on farmlands in the HST right-of-way by reducing right-of-way width to 50 ft (15 m) in constrained areas or, if appropriate agreements with the existing owner/operators were developed and safety considerations were addressed, by placing the HST infrastructure completely within the existing rail rights-of-way. Compared to the trend of farmland loss in California of 49,700 ac (20,113 ha) per year, or nearly 845,000 ac (341,960 ha) projected to be lost by 2020, the right-of-way needs of the Modal and HST Alternatives would each represent less than 0.4% of the total potential farmland loss. Furthermore, the indirect effect of the HST Alternative on urban growth would reduce conversion of farmlands by about 4,100 ac (1,659 ha) compared to the No Project Alternative, and about 24,000 ac (9,712 ha) compared to the Modal Alternative on a statewide basis by 2035.

The Modal Alternative would potentially impact substantially more area of sensitive vegetation habitat (four to nearly eight times more), wetlands (over one and a quarter times more), and non-wetland waters (nearly five times more) than the HST Alternative. The Modal Alternative would also have higher potential impacts on other water resources such as floodplains, streams, and groundwater. On a regional basis, differences in potential impacts on biological resources between the Modal Alternative and HST Alternative are identified in the southern mountain crossing along I-5, where significant ecological areas (SEAs) would be impacted. Modal Alternative improvements to I-5 and SR-14 would involve extensive cut and fill through the mountains that would have potentially significant visual and biological impacts in this natural forested landscape.

The Modal Alternative would generally have greater potential impacts in all regions on public parks, wildlife areas, and recreational resources (Section 4(f) and 6(f) resources) than the HST Alternative because existing transportation corridors are bordered by urban development that includes public parks, recreation areas, and historic properties. Potential exceptions are in the Bay Area to Merced and Bakersfield to Los Angeles regions where there could be slightly more Section 4(f) and 6(f) resources along the HST Alternative alignments than along the Modal Alternative alignments. This is primarily due to the proximity of recreational areas to the new I-5 corridor HST alignment options through the southern mountain crossing, and the HST alignment options through Henry Coe State Park that link the Bay Area and the Central Valley in Northern California.

S.7 High-Speed Train Alignment and Station Options

Through a comprehensive screening evaluation covering many regions of the state, numerous alignment and station options have been identified and selected for analysis in the Program EIR/EIS. These alignment and station options are evaluated and compared in Chapter 6, *Comparison of HST Alignment and Station Options*, of the Draft Program EIR/EIS. The Authority expects to identify a preferred system of alignment and station options in the Final Program EIR/EIS, after the public comment period for this

Response to Comments of Wayne K. Tanda, General Manager, Los Angeles Department of Transportation, August 27, 2004 (Letter AL050)

AL050-1

Acknowledged. The Authority has identified the MTA/Metrolink as preferred between Sylmar and Los Angeles. Between Burbank and Los Angeles Union Station, the MTA/Metrolink refers to a relatively wide corridor within which alignment variations will be studied at the project level. The MTA/Metrolink was the only feasible alignment identified between Sylmar and Burbank (along the San Fernando Road Corridor). For this program level process (conceptual level detail of engineering) the HST tracks along the MTA/Metrolink alignment (along with other rail services) were assumed to be in a trench for most of the alignment from just north of Van Nuys Blvd. (near SR-118) to Hollywood Way (near Burbank Airport). North of SR-118 much of the HST infrastructure is assumed to be on an aerial structure (see Figure 6.4-2 of the Draft Program EIR/EIS) through Sylmar and San Fernando. Because of the Pacoima Wash and other obstacles, trenching through this area was not considered to be feasible. Future project specific evaluation of the alignment through the City of Los Angeles could include a design option that puts portions of the HST infrastructure below grade. The design options to be investigated as part of future project specific evaluation(s) would be determined during the scoping period of those studies.

AL050-2

Acknowledged. The Authority has identified Los Angeles Union Station as the preferred site for a potential HST station to serve Los Angeles. Please see standard response 6.39.5 in regards to a potential HST link to LAX.

AL050-3

Please see standard response 6.39.1.

AL050-4

Acknowledged.

AL050-5

Acknowledged.

AL050-6

Acknowledged.

AL050-7

Please see standard response 6.23.1.

AL050-8

Acknowledged. Developing a financing plan and determining whether "the HST system should share in any expanded highway and transit project costs that may be incurred by local entities" is beyond the scope of this program EIR/EIS process. Should the HST proposal move forward, these site-specific issues will be investigated as part of future more detailed studies.

AL050-9

Acknowledged. Please see standard response 10.1.7. Future studies would identify minimal operable segments.

AL050-10

Acknowledged. The Authority looks forward to continuing to work cooperatively with LADOT, SCAG, the City of Ontario, the San Bernardino Council of Governments and other local entities on future HST studies. Please see response AL065-1.

AL050-11

Acknowledged. If the HST proposal moves forward, the Authority would continue to coordinate with the LADOT and other local agencies. During project specific environmental studies, the Authority would seek to coordinate HST planning with the various plans of regional and local government agencies, including major airports such as LAX, Ontario, and Palmdale.

AL050-12

Acknowledged. Please see standard response 6.23.1. The Authority has identified a preferred HST system that connects as directly as possible with Los Angeles Union Station, Ontario Airport, and Palmdale Airport. Please see standard response 6.39.1 in regards to a potential direct connection with LAX.